

Work Order ID 131059

March-26-15 1:39:09 PM

131059

Page 1

Item ID: D2435 Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Bearpaw

Start Date: 3/26/15 Start Qty: 4.00 *4*

Required Date: 3/26/15 Req'd Qty: 4.00 *4*

Reference: Cust Item ID:

Customer:

Approvals: Process Plan: MCS Date: 15-03-23 Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2435	Rev E1								

120 FLOW WATER JET 0.00

120

Waterjet Memo 0.00

FLOW CNC Waterjet CUT BLANK AS PER FILE D2435

4 0 JM15-3-28

130 HAAS CNC VERTICAL MACHINING #1 0.00

130

HAAS 1 Memo 0.00

HAAS CNC vertical machine #1

1-Inspect material for defects or damage prior to machining
2-Machine as per Folio FA789 and Dwg D2435 Identify as D2435
3-Deburr

4 0 15/04/15

140 QC2- Inspect parts off machine FAI/FAIB 0.00

140

QC Memo 0.00

Quality Control

4 0 15/04/15

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Page 2

Accept

Setup Start *NS1*

Stop *NS2*

Start Date: 3/26/15 **Start Qty:** 4.00 ***4***

Required Date: 3/26/15 **Req'd Qty:** 4.00 ***1***

Cust Item ID:

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run	Start	*NR1*
	Stop	*NR2*

[illegible]

151	Identify as per dwg & Stock Location:	ST446A	0.00
151			
Packaging	Memo		0.00
Packaging			

4 APR 17 2015 DAS 6 9-89

190	QC21- Final Inspection - Work Order Release	0.00
190		
QC	Memo	0.00
Quality Control		

MLJ 15-04-17

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Picklist Print

March-26-15 1:39:08 PM

Page 1

Work Order ID: 131059

131059

Parent Item: D2435

D2435

Parent Item Name: Bearpaw

Start Date: 3/26/15

Required Date: 3/26/15

Start Qty: 4.00

Required Qty: 4.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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MUHMWB10

Purchased

No

120

sf

365.8940

3.2

13

MUHMWB10

UHMW 1" Black - 48"x120" Tivar Mfg.#52480104

**

Jm15-3-28

Location

Loc Qty

Loc Code

MAT

272.527

m131661

272.527

MAT018

93.367

m131335

93.367

131661

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DART AEROSPACE LTD		Work Order:	131059
Description: Bearpaw		Part Number:	D2435
Inspection Dwg: D2435 Rev: E1		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.063 x 45°	+0.030/-0.010	0.053	✓		MIP-04	vern
B	5.500	+/-0.030	5.500	✓		...	...
C	0.200	+/-0.030	0.195	✓		MIP-08	Height - Dial depth mic
D	R0.250	+/-0.030	0.250	✓		---	Radius gauge
E	0.250	+/-0.010	0.258	✓		MIP-04	vern
F	0.625	+/-0.030	0.635	✓		...	...
G	0.25 x 45°	+/-0.030	0.250	✓		...	...
H	0.375	+/-0.010	0.373	✓		118-120	Deep thread mic
I	19.000	+/-0.030	19.000	✓		MIP-07	Tape
J	0.950	+0.030/-0.010	0.960	✓		MIP-04	vern
K	Ø0.260	+0.005/-0.000	0.260	✓		...	...
L	Ø0.930	+/-0.030	0.930	✓		...	...
M	0.30	+0.030/-0.000	0.315	✓		MIP-08	Dial depth mic
N	0.375	+/-0.030	0.377	✓		MIP-04	vern
O	7.375	+/-0.030	7.375	✓		CAL-02	vern
P	4.250	+/-0.010	4.250	✓		MIP-04	vern
Q	2.000	+/-0.030	1.997	✓		...	...
R	9.000	+/-0.010	9.000	✓		...	...
S	15.750	+/-0.030	15.750	✓		MIP-07	Tape

Measured by:	<i>[Signature]</i>	Audited by:	DAS 20 9-89	Prototype Approval:	N/A
Date:	15/04/15	Date:	15-04-15	Date:	

Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue P/O K10007	KJ/RF <i>[Signature]</i>	<i>[Signature]</i>



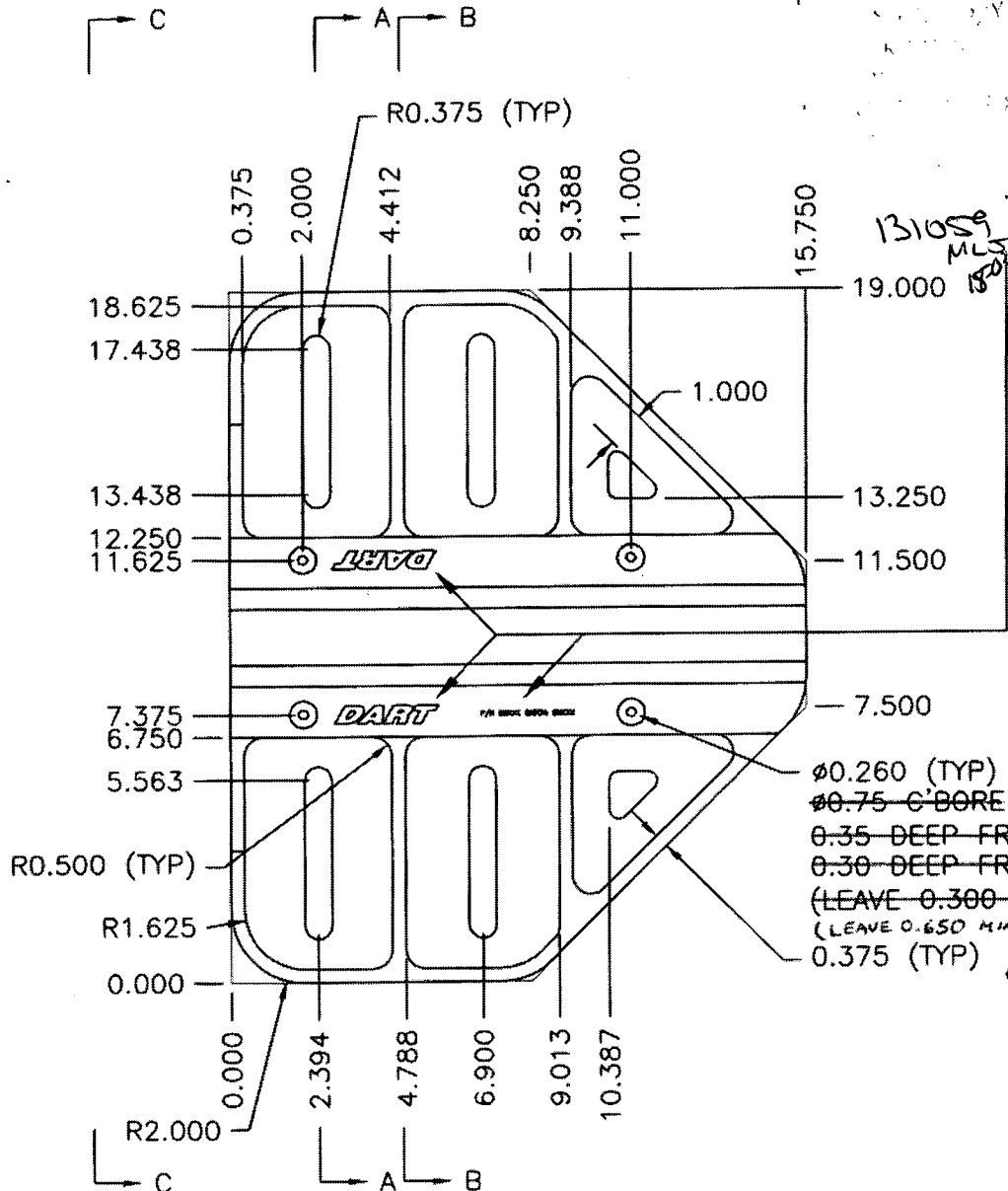
RELEASED
98.06.17 KE

DESIGN	DRAWN BY	DART Aerospace Ltd HAMMERSBURT, ONTARIO, CANADA	REV. E
CHECKED KE	APPROVED KE	DRAWING NO. D2435	SHEET 1 OF 2
DATE 98.05.19	TITLE BEARPAW	SCALE 1:5	

A	96.01.24	NEW ISSUE
B	96.03.26	CHANGE BORE AND C'BORE DEPTH
C	97.05.07	CHANNEL & C'BORE DEPTH CHANGED
D	97.10.17	R1.5 BORE WAS R2.637 (TSR A469)
E	98.05.19	CHANGE C'BORE, R1.58 WAS R1.50

ENGRAVE LOGO TO MAX DEPTH OF 0.012. ENGRAVE PART AND BATCH NUMBERS TO MAX DEPTH OF 0.010. (TYPICAL LOCATION AS ILLUSTRATED)

131059
ML5.12



Ø0.260 (TYP) Ø0.93 C'BORE
Ø0.75 C'BORE 0.30 DEEP FROM BOTTOM
0.35 DEEP FROM TOP (MIN.)
0.30 DEEP FROM BOTTOM
(LEAVE 0.300 MIN.)
(LEAVE 0.650 MIN.)
0.375 (TYP)



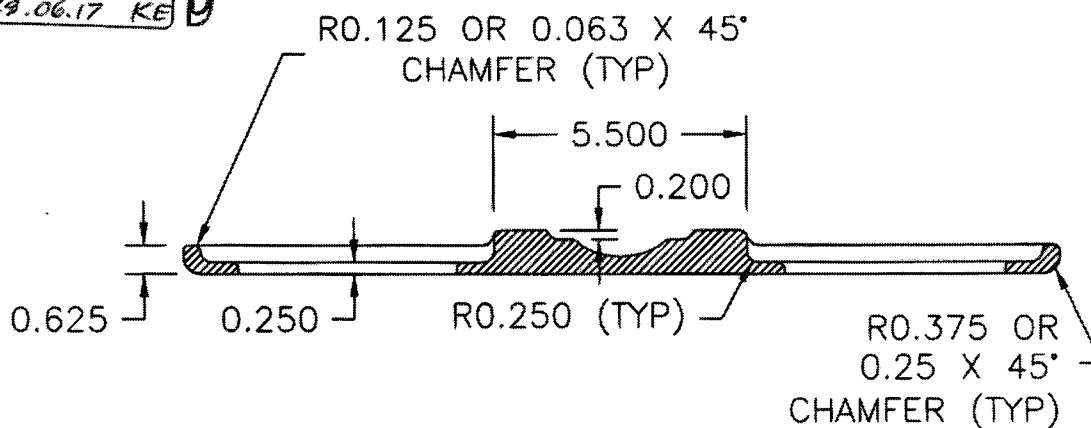
9143

MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689
1.00 THICK (MACHINE TO 0.950)

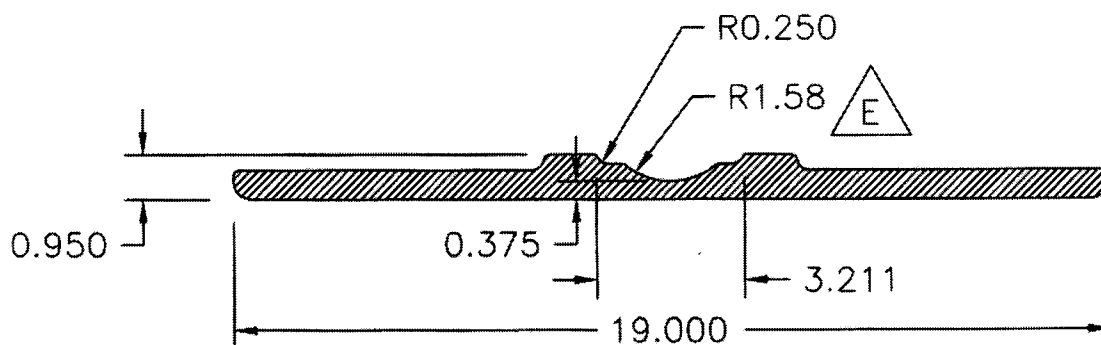


DESIGN <i>KE</i>	DRAWN BY <i>KE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>ME</i>	APPROVED <i>KE</i>	DRAWING NO. D2435	REV. E SHEET 2 OF 2
DATE 98.05.19		TITLE BEARPAW	SCALE 1:4

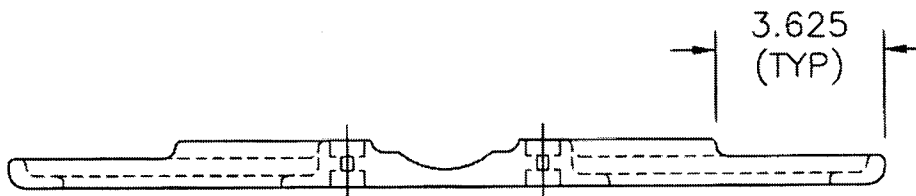
RELEASED
99.06.17 KE



SECTION A-A



SECTION B-B



SECTION C-C